

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Currently Amended) A method for estimating noise power, comprising:
averaging correlated values of a pilot ~~known~~ signal arranged in a plurality of subcarrier waves;
calculating noise power per one subcarrier wave using the averaged values of the correlated values of said pilot ~~known~~ signal;
correcting calculation error of said noise power generated by difference of channel variation between subcarrier waves for multiple times based on said pilot ~~known~~ signal;
cumulative-adding values of noise power per one subcarrier wave, which are corrected in desired subcarrier wave band; and
averaging thereof by multiplying a predetermined value to the value obtained by the cumulative-adding operation to estimate noise power.
2. (Currently Amended) The method for estimating noise power according to claim 1, further comprising:
correcting calculation error of said noise power per one subcarrier wave generated by difference of channel variation between subcarrier waves, using an average value of the correlated value of said pilot ~~known~~ signal in the subcarrier wave in question; and
further repeatedly correcting an error generated by said correction.

3. (Currently Amended) The method for estimating noise power according to claim 1, wherein number of a plurality of employed adjacent subcarrier waves is variable when the averaging operation for the correlated values of said pilot ~~known~~ signal in a plurality of adjacent subcarrier waves is conducted.

4. (Currently Amended) The method for estimating noise power according to claim 3, further comprising:

measuring a level of spreading of ~~the~~ multipath based on a ~~the~~ received signal;

determining a level of ~~the~~ correlation between adjacent subcarrier waves by the level of the measured spreading of the multipath,

wherein number of said employed plurality of adjacent subcarrier waves is increased when the correlation between adjacent subcarrier waves is high, and

wherein number of said employed plurality of adjacent subcarrier waves is decreased when the correlation between adjacent subcarrier waves is low.

5. (Currently Amended) The method for estimating noise power according to claim 1, further comprising:

estimating Doppler frequency based on a ~~the~~ received signal,

wherein number of employed pilot ~~known~~ signal arranged along the time orientation is increased when estimated Doppler frequency is low,

wherein number of employed pilot known signal arranged along the time orientation is decreased when estimated Doppler frequency is high, and

wherein ~~the~~ value obtained by in-phase adding the correlated values ~~value~~ of a plurality of pilot known signals in each of subcarrier waves is employed as the a correlated value of said pilot known signal.

6. (Currently Amended) A noise power estimation apparatus, comprising:

a pilot known signal-extracting means for extracting pilot known signal from signal transmitted by using a plurality of subcarrier waves from a communication partner;

a first multiplying means for multiplying respective predetermined coefficients to correlated values of said pilot known signal between a plurality of adjacent subcarrier waves;

a square means for calculating noise power per one subcarrier wave by squaring after adding said multiplying result;

a cumulative-adding means for cumulative-adding noise power per one subcarrier wave calculated by said square means for desired subcarrier waves; and

a second multiplying means for multiplying a predetermined value to the cumulative-added value calculated by said cumulative-adding means to obtain an averaging value,

wherein said first multiplying means has the a predetermined coefficient reflecting a result, which is obtained by correcting for multiple times a calculation error of noise power per one subcarrier wave generated by a difference in a channel variation between subcarrier waves based on said pilot known signal.